Agri-environmental knowledge management and networks of practice: a workshop background paper

Conference or Workshop Item

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Sue Oreszczyn and Andy Lane
The Open University, Walton, Milton Keynes MK7 6AA
s.m.oreszczyn@open.ac.uk

INTRODUCTION

The workshop session was designed to capture and map the thinking of conference participants on the key components of a knowledge management system for hedgerows. It seeks to identify which people and what types of knowledge are involved in the various knowledge exchanges and the nature of the exchanges between those involved. The session drew on our experiences of knowledge exchange processes in environmental settings when working with policymakers, researchers, business and NGOs across a number of participatory research projects.

IMPROVING THE LINK BETWEEN RESEARCH, POLICY AND PRACTICE

In all areas of research policy and practice, including agricultural and environmental management, there has been growing interest in knowledge brokerage and knowledge exchange practices. This interest focuses on how to improve connections between researchers, civil society organisations and practitioners so as to improve the relevance of research and use of research outputs (see for example, Rickinson *et al.*, 2011). It arises from concern that large bodies of knowledge are generated for policy use or to improve practices in agricultural and environmental management, yet this knowledge is not always deemed useful or is being used. Equally changes in organisational structures and responsibilities can lead to fragmentation of effort across a large number of people (Klerkx & Proctor, 2013) and/or create complex knowledge management challenges for key advisors (RELU, 2011). Researchers are also being challenged to provide a more solid and less disparate evidence base for making policy decisions (Lyall *et al.*, 2004; Oakley, 2001). Dialogue and interaction with potential users are now considered essential elements of successful research projects. In the case of agriculture, a move towards transdisciplinarity (e.g. Tress *et al.* 2003), increasingly more participatory approaches (eg. Cerf *et al.,* 2000) and co-researching practices (eg. Oreszczyn *et al.*, 2010b) which view knowledge production as a social process, have gone some way to address concerns and improve knowledge transfer and exchange. Yet their remains a need, through a better understanding of existing knowledge connections, to improve links between farmers, researchers and policy actors and to foster or enable improvements in knowledge flows within farm management systems generally of which hedgerow management systems are a part.

COMMUNITES AND NETWORKS OF PRACTICE, WEBS OF INFLUENCERS AND BROKERING

In recent years there has been a growing interest in Communities of Practice (Wenger, 1998) and Networks of Practice (Brown & Duguid, 2001) in connection with informal knowledge gathering, notably in the fields of education, management, healthcare and computer science. These concepts have been used both as an analytical framework and as an interventions tool (see, for example, Koliba & Gajda, 2009). Part of the appeal of these concepts is that they may also be viewed from a very practical viewpoint to think about 'real world' situations, rather than simply as academic devices. In simple terms, Communities of Practice are groups of people who share a common pursuit, activity or concern. Members do not necessarily work together,

but form a common identity and understanding through their common interests and interactions. Networks of Practice concern the relations of groups of people, rather than individuals. They have the same characteristics as Communities of Practice but are more loosely connected. In the agricultural context, theories about Communities of Practice, and particularly those about Networks of Practice, provide a useful lens through which to view the particularities of the farming community's identity, knowledge, and learning. They have proved useful in our previous research for highlighting a number of features that are significant to farmers' practices and that raise implications for policy (Oreszczyn *et al.*, 2010a). However, the distributed and independent nature of farming businesses and the number of entities and bodies that they deal with all the time requires extending these ideas to encompass, and place emphasis on, the relationships that farmers have with their wider 'web of influencers' of practice. This web of influencers is important for providing an enduring role in influencing farmers practice because of the way that knowledge and learning, rather than just information and viewpoints, is developed and/or exchanged around the boundaries between the different Communities of Practice involved.

Within this much broader 'agriculturally related' community, key individual influencers, rather than organisational influencers, were found to be important for promoting farmers' learning. Particularly important were those individuals able to cross the boundaries between networks and communities of practice. Such individuals (also potentially groups or organisations) generally have particular skills, abilities or personal attributes that mean they are ideally placed for their role. They are variously conceptualised as knowledge brokers, boundary spanners or knowledge intermediaries because of the role they play in contextualising and translating knowledge between communities. They are not only knowledgeable about but also trusted, respected and so accepted by different Communities or Networks of Practice.

As noted by Karner *et al.*, (2011), the academic literature on knowledge brokerage tends to assume that knowledge is produced by formal research and subsequently needs to be 'transferred' to those who may make use it. This could also be said of the current trend for research dissemination activities following the end of research projects. This one way flow of knowledge raises questions about what counts as research and knowledge. Many of those engaged in professional practice, such as farmers and farming organisations, are also actively engaged in generating new insights and generating new knowledge through their practice and experimentation with new technologies and new knowledge in their own context ('situated knowledge'). Our research highlighted the way that farmers' learning in particular, occurs in a complex social learning system. They have to cope constantly with significant amounts of new knowledge about matters (e.g. regulations, new products, new research, etc.) that impact on their practice and can reduce the scope for informal and formal knowledge to be deployed. The question then is how to build knowledge systems that incorporate effective brokering and that take account of the complexity of learning systems and that better values and links the tacit or informal situated knowledge (i.e. the local knowledge that may be gained from years of practical implementation in the management of agricultural systems) with the explicit knowledge generated by formal research and the policymaking system.

MAPPING KNOWLEDGE FLOWS

The workshop builds on a previous workshop conducted by us that mapped the complex interactions among knowledge brokers in different contexts – health, food and international development (Oreszczyn & Lane, 2012). This exercise indicated the general lack of a balanced flow of knowledge exchange in the different contexts and suggested that while some knowledge

users are recognised as also being important knowledge creators and there is some knowledge flow from users to creators, there remains a tendency, for knowledge flows to operate one way - from 'professional' creators 'at a distance' to the 'local' users. The lack of a holistic, circular or joined up, approach to knowledge flows and exchanges in the different contexts was also drawn out as was the way knowledge flows between users, creators and intermediaries or brokers tended to be piecemeal. Not only was there a lack of opportunities for knowledge to flow from users to knowledge creators but also that there was little knowledge exchange among intermediaries. Further, intermediaries were found to operate at different scales and levels and that this may affect their ability to be effective. Intermediaries, or brokers, may exist at the institutional or individual level and have different levels of experience and different roles. Knowledge brokering was found to encompass a variety of activities some of which may be competing. For example, the knowledge intermediaries in the workshop had very particular roles, in the case of one broker, so many roles that it may limit their ability to be effective boundary spanners. Dealing with such diversity could potentially dilute their effectiveness. Our research, like that of others, has suggested the importance of establishing trust and respect from the different Communities (or Networks) of Practice that a broker/intermediary or boundary spanner is attempting to connect. This may be more difficult if the intermediary is attempting to play their role across a diversity of Communities or Networks of Practice.

By focusing on knowledge flows within the existing hedgerow management system, this workshop aims to consider the implications for managing hedgerows for the future. It takes the template diagram below (Figure 1) and invites participants to firstly identify people or organisations that are currently seen as knowledge creators, brokers and/or users (some people may do more than one) for hedgerow management in the UK. It secondly invites the participants to identify the links and capture the relationships between these various 'actors' and explore the different forms of knowledge (in terms of both content and medium used). Thirdly we invite

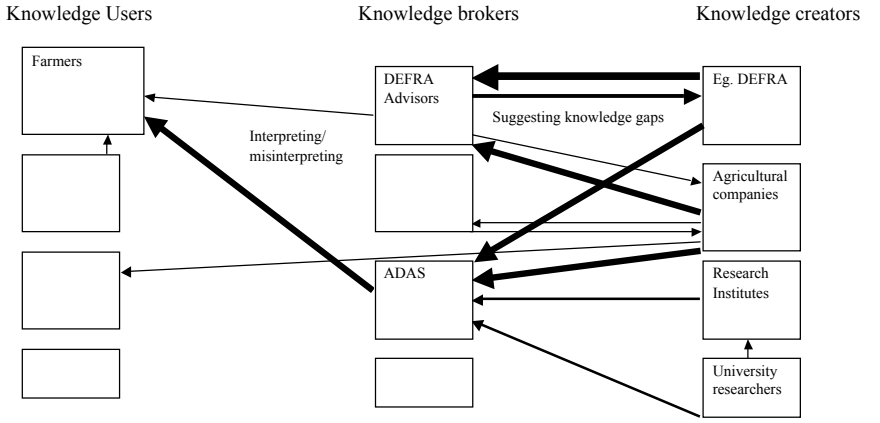

Figure 1 Knowledge flows in a hedgerow management system.
The map indicates the direction of the knowledge exchange using arrows, the strength of exchange by thickness of the arrows, the nature of the exchange – e.g. face-to-face; one-one; printed matter; on-line text; on-line conversation. Note, if it is a positive or negative exchange; do exchanges bypass some people? Where do the brokers sit in the organisation?

participants to indicate where there may be gaps in the system or needs for changing knowledge practices on the part of some of the actors. Thus this diagrammatic device, created through facilitated dialogue, in itself is used to exchange knowledge and help foster Networks of Practice through the participants.

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